

REMARKS/ARGUMENTS

Claims 12-29 are pending in the application. Claim 16 was objected to under 37 CFR § 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Claims 12-29 were rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Claims 28 and 29 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Claims 12-21, 26, and 27 were rejected under 35 U.S.C. § 102(e) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 6,573,026 to Aitken et al. ("Aitken"). Claims 22-25 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,146,375 to Juhazs et al. ("Juhazs").

The claims have now been amended. Claims 30-32 have now been added. No new matter has been added. Reconsideration of the application in view of the above amendments and following remarks is respectfully requested.

Objection to the claims

Claim 16 was objected to under 37 CFR § 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Claim 16 has now been cancelled rendering the rejection moot.

Rejections Under 35 U.S.C. § 112, First Paragraph

Claims 12-29 were rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. The Office Action states that the Specification fails to provide a written description for an unamplified output of a cavity-dumped femtosecond laser.

Independent claims 12 and 22 have now been amended to remove the recitation of the output being unamplified. The dependent claims also do not recite this feature. Withdrawal of the rejection of the claims 12-29 under 35 U.S.C. § 112, first paragraph, is respectfully requested.

Rejections Under 35 U.S.C. § 112, Second Paragraph

Claims 28 and 29 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Claims 28 and 29 have each now been amended to recite “the method recited in claim 22” which has proper antecedent in claim 22. Withdrawal of the rejection of claims 28 and 29 under 35 U.S.C. § 112, second paragraph, is respectfully requested.

Rejections Under 35 U.S.C. §§ 102 and 103

Claims 12-21, 26, and 27 were rejected under 35 U.S.C. § 102(e) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 6,573,026 to Aitken et al. (“Aitken”).

Aitken describes a femtosecond laser writing system that generates a laser of less than 10 nJ and a pulse width preferably less than 100 fs. See Aitken, column 6, lines 54-60. Aitken also describes the existence of laser systems that use the cavity dumped approach which generate pulse energy between 1 and 50 nJ with a duration under 40 fs. See Aitken, column 2, lines 15-17 and Table 1.

Claim 12 has now been amended to recite “a beam source including a cavity-dumped femtosecond oscillator, the beam source being configured to generate radiation having a pulse energy in a range from 100 nJ to 10 μ J and a pulse duration in a range from 100 femtoseconds to 1 picosecond.” Support for this amendment may be found in the Specification at, for example, paragraph [0012].

It is respectfully submitted that Aitken does not describe a beam source including a cavity-dumped femtosecond oscillator that is configured to generate radiation having a pulse energy in a range from 100 nJ to 10 μ J and a pulse duration in a range from 100 femtoseconds to 1 picosecond, as required by independent claim 12. In contrast, Aitken only describes that the cavity dumped approach may generate pulse energy between 1 and 50 nJ with a duration under 40 fs. See Aitken, column 2, lines 15-17 and Table 1. Because Aitken fails to disclose these features of claim 12, it cannot anticipate claim 12 or its dependent claims.

Furthermore, Aitken only suggests using the femtosecond oscillator without cavity dumping, and recommends generating pulse energy below 10 nJ with a pulse width that is preferably less than 100 fs. Accordingly, Aitken teaches away from the recited beam source which is “configured to generate radiation having an energy in a range from 100 nJ to 10 μ J and a pulse duration in a range from 100 femtoseconds to 1 picosecond.” Therefore, there would be no reason, in view of Aitken, for a person of ordinary skill in the art to make a beam source with the above-recited features. Thus, Aitken cannot render claim 12, or its dependent claims 13-15, 18-21, 26 and 27 obvious.

Claims 22-25 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,146,375 to Juhazs et al. (“Juhazs”).

Juhazs describes a method of removing tissue from the sclera using a laser beam. See Juhazs abstract.

Independent claim 22 recites “providing a laser beam having femtosecond pulses using a beam source including a cavity-dumped femtosecond oscillator.” Juhazs does not teach or suggest this feature. Indeed, the Office Action admits that Juhazs does not disclose a cavity-dumped femtosecond oscillator. See Detailed Action, page 5, lines 6-7. It is respectfully submitted that the use a cavity-dumped femtosecond oscillator would not have been obvious in view of Juhazs. The Office Action has failed to provide a reason that this feature would have been obvious. As set forth in M.P.E.P. 2141 (III), the courts have held that “[R]ejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” The suggestion in the Office Action that the use of a cavity-dumped femtosecond oscillator would have been obvious at the time of the invention because the Specification fails to teach that such use would provide an advantage or solve a particular problem (see Detailed Action, page 5, lines 7-8) is not well reasoned. The lack of a description in the Specification of an advantage or particular problem solved by a claimed feature does not render a claim obvious. Rather, the burden is on the Examiner to provide an apparent reason why the feature would have been obvious. Furthermore, contrary to this assertion in the Office Action, the Specification does, in fact, provide the purpose of using the cavity-dumped femtosecond oscillator. For example, paragraph [0017] of the Specification

explains that the use of the cavity-dumped femtosecond oscillator allows the energy of the pulses to be raised to the microjoule range.

Further, independent claim 22 has also been amended to recite “the pulses having an energy in a range from 100 nJ to 10 μ J.” Support for this amendment may be found in the Specification at, for example, paragraph [0012]. Juhazs fails to teach or suggest pulses having the recited energy range. Accordingly, Juhazs cannot anticipate or render obvious claim 22 or its dependent claims 23-25 for this additional reason.

Reconsideration and withdrawal of the rejection of claims 22-25 under 35 U.S.C. § 103 based on Juhazs is respectfully requested.

New Claims

New claims 30-32 have now been added. Support for the features recited in claims 30-32 can be found in the Specification at, for example, paragraph [0012]. Claims 30 and 31 depend from claim 12 and are patentable for at least the same reasons as claim 12. Claim 32 depends from claim 22 and is patentable for at least the same reasons as claim 22.

CONCLUSION

Applicants respectfully submit that the patent application is in condition for allowance. If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned attorney.

The Commissioner is hereby authorized to charge any unpaid fees deemed required in connection with this submission, including any additional filing or application processing fees required under 37 C.F.R. §1.16 or 1.17, or to credit any overpayment, to Deposit Account No. 12-1216.

Respectfully submitted,



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